## REMARKS

Claims 1-13 are all the claims pending in the application. By this Amendment, Applicant amends claims 1 and 4 to further clarify the invention and claim 13 for conformity therewith. In addition, Applicant rewrites allowable claims 3 and 6 into their independent forms and adds new claim 14.

### I. Preliminary Matter

As a preliminary matter, Applicant thanks the Examiner for indicating acceptance of the drawing figures filed on August 21, 2007.

### II. Summary of the Office Action

The Examiner withdrew the previous grounds of rejection. The Examiner, however, found new grounds for rejecting the claims. In particular, the Examiner objected to claim 12 for a minor informality and rejected claims 1, 2, 4, 5, 8, 9, 12, and 13 under 35 U.S.C. § 103(a). Claims 3, 6, 7, 10, and 11 contain allowable subject matter.

### III. Objection to the Claim

Claim 12 is objected to because of alleged minor informality. Specifically, the Examiner suggests deleting the article "the" from the second occurrence of voice data in claim 12. Applicant respectfully submits that since it is a second occurrence of voice data in claim 12, the article "the" is proper as it clearly refers to the first occurrence of the voice data.

### IV. Prior Art Rejections

Claims 1, 2, 8, 9, and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,721,282 to Motley (hereinafter "Motley") in view of U.S. Patent No.

4,962,497 to Ferenc et al. (hereinafter "Ferenc"). Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

Independent claim 1 *inter alia* recites: "formatting means for subdividing and inserting at least one section of the IP datagrams in the time slots corresponding to the available bandwidth, wherein the formatting means determines whether size of a section of the IP datagram is too large for insertion in the time slots based on the predicted available bandwidth."

In an exemplary embodiment, the formatting means subdivides and inserts IP datagrams into open time slots of frames containing mobile telecommunications data. The formatting means allows voice or other data coming from mobile phones to be sent in the same frame as data from remote devices with internet access. In addition, the available bandwidth predictions are used to regulate the data stream fed to the input of the traffic multiplexing device, represented in material terms by the buffer memory 109 and the formatting unit 106. Data stream regulation prevents the buffer memory 109 from becoming congested with data packets whose complete transmission cannot be guaranteed within a fixed time period. Accordingly, an exemplary embodiment automatically adjusts the size and the timing of packets supplied via the Ethernet network to the available capacity of the multiplexing device. The foregoing remarks relate to the invention in a general sense, and the remarks are not necessarily limiting of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claim mentioned above.

The Examiner now acknowledges that Motley does not disclose or suggest the formatting means. The Examiner, however, alleges tat Ferenc cures the above-identified deficiencies of Motley. Specifically, the Examiner relies on col. 11, lines 24 to 26 of Ferenc. Applicant respectfully disagrees.

In general, Ferenc relates to a modular, substantially infinitely-growable, multi-node switching system that operates under distributed control to serve integrated circuit-switched and packet-switched traffic at the data rates appropriate for each type of traffic. The system includes a number of interconnected identical switching units that form at least one communication switching node. A number of communication endpoint nodes are connected to the one or more switching nodes for communicating with each other through the switching nodes. Each switching node includes a number of different ones of the identical switching units, and a communication medium that interconnects all of the units of the switching node to allow each unit of a node to broadcast all communications received from a connected link to all of the units of the node (*see* Abstract).

Ferenc further discloses the CSI 212 receives packets and eight-bit time slots of information from buses 202 and 103, respectively, and inserts the circuit-switched information from TDM bus 103 into data (D) fields 313 of selected 10-bit time slots 300 of a transmission frame 302 of TDM link 102. This leaves the remaining time slots 300 of frame 302 idle with respect to circuit-switched traffic, and hence available for the transmission of packet data. CSI 212 <u>breaks down each received packet into eight-bit bytes and inserts the bytes into data (D) fields 313 of the idle time slots 300 of a frame 302 of TDM link 102</u>. CSI 212 adds an identity (I) bit 312 and a parity (P) bit 314 to the eight data (D) bits 313 within each time slot 300. The value of I bit 312 for a time slot 300 signifies whether D field 313 time slot 300 represents a byte of circuit-switched or packet-switched information. I bit 312 is used by the receiving circuitry of CSI 212 at the other end of link 102 to route the received time slot 300 and its contents to either the circuit-switch facilities i.e., TDM bus 103, or to the packet-switch facilities, i.e., PKT bus 202. In Ferenc, the time slots 300 of link 102 are grouped into subframes 301 each comprising

three time slots 300 together with a framing (F) bit 310 and a spare (S) bit 311 prepended thereto, for a total of 32 bits. Subframes 301 are, in turn, grouped into frames 302 each comprising 128 subframes 301, for a total of 4096 bits per frame (Fig. 3; col. 8, lines 24 to 50).

For example, col. 11, lines 4 to 39 of Ferenc recite:

> Time-slot formatter 231 implements <u>circuit-and packet-switched data multiplexing</u>: it meters out circuit and packet information to fill the out-bound TDM 102 link bandwidth. Time-slot formatter 231 contains a 512-word circuit-and packet-multiplexer control RAM 243, whose contents are programmed by microprocessor 220 over control path 250 as it sets up and takes down circuit-switched connections to TDM link 102. The contents of control RAM 243 specify which time slots of TDM bus 103 are to be inserted into which time slots of TDM link 102. The contents of control RAM 243 are cycled through sequentially, once per frame. The content of each control RAM 243 location causes formatter 231 to select time slots from either TDM bus 103 (i.e., from data store 226) or packet information for PKT bus 202 (i.e., from FIFO buffer 244) for insertion into the data field of each out-bound link 102 time slot. For each out-bound link 102 time slot, a TDM bus 103 time slot may be inserted into the data field of the link 102 time slot, but for many of the time slots, TDM bus 103 time slots are not specified by RAM 243 for insertion, i.e., the link 102 time slots are "idle". <u>Formatter 231 inserts packet information into the data field of those "idle" time slots</u>. <u>Formatter 231 does not commence to insert bytes of a packet into link 102 "idle" time slots until the full packet has been received in FIFO buffer 244</u>. Receipt of a full packet is indicated to formatter 231 by the receipt in FIFO buffer 244 of the end-of-packet (EOP) bit--the last bit of a packet. <u>While no packet data is available for insertion, formatter 231 instead inserts an "idle" pattern of flag characters into the "idle" time slots</u>. <u>For each outgoing time slot, formatter 231 also sets the value of the I bit to indicate whether it carries circuit-switched or packet-switched data</u>. Time-slot formatter 231 then sends the combined circuit and packet stream of outgoing time slots to a packet inserter 222 (emphasis added).

That is, Ferenc only discloses a formatter 231 that inserts packet information into the data field of idle time slots. However, in Ferenc, there is no disclosure or suggestion of <u>the IP datagrams</u>. Furthermore, in Ferenc, the formatter 231 simply divides the received packets into 8 bit parts and inserts them into the idle slots. Ferenc does not disclose or suggest the formatter 231 <u>determining</u> whether <u>the size of a section</u> of the IP datagram is too large <u>for insertion in the time slots</u> based on the predicted available bandwidth, and only then subdividing and inserting at least

one section of the IP datagrams in the time slots corresponding to the available bandwidth if the size is acceptable. Ferenc only discloses that insertion of a data packet is <u>not commenced until the full data packet is received</u> but is silent regarding determining the size of a part of the packet prior to insertion. Therefore, Ferenc does not cure the above-identified deficiencies of Motley.

For at least these exemplary reasons, claim 1 is patentable over Motley in view of Ferenc, which lack a formatter that determines whether the size of the part of the data packet is too large for insertion in the time slots. In Ferenc, the formatter simply divides the packet into 8 bit parts. In view of the foregoing, Applicant respectfully requests the Examiner to withdraw the rejection of claim 1 and its dependent claims 2, 8, 9, and 12.

Claims 4 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Motley in view of U.S. Patent No. 7,106,738 to Saidi et al. (hereinafter "Saidi"). Applicant respectfully traverses these grounds for rejection at least in view of the following exemplary comments.

Independent claim 4 recites: "a demultiplexing device adapted to demultiplex a compressed data block comprising a compressed block and at least one IP datagram section, wherein the demultiplexing device comprises: deformatting means for extracting the IP datagram sections from a frame comprising data from a mobile telecommunication network and the at least one section of the IP datagrams and concatenating the IP datagram sections in order to direct the IP datagram sections to the Ethernet network; and data decompression means for reconstituting active and static channels from the compressed data block." In an exemplary embodiment, the demultiplexing device receives the data transmitted by a multiplexing device, extracts the IP datagram sections transferred either in whole or in part, and concatenates the stream(s) of IP datagrams. The foregoing remarks relate to the invention in a general sense, and the remarks are

not necessarily limiting of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claim mentioned above.

The Examiner acknowledges that Motley fails to disclose or suggest deformatting means, as set forth in claim 4. The Examiner, however, alleges that Saidi discloses the deformatting means as set forth in claim 4 (*see* page 4 of the Office Action). Applicant respectfully disagrees.

Saidi discloses system architecture capable of processing fixed length and/or variable length data packets. In Saidi, incoming data packets are queued together according to their corresponding switch processing parameters (SPPs), and then the commonly-queued data packets are processed through a switch fabric as a single unit. In Saidi, the commonly-queued data packets are processed by the switch fabric as a single train packet or sliced into a set of subtrain packets. A switch fabric then processes the set of subtrain packets in parallel using a plurality of switch planes. In Saidi, there are a number of packet formatters and deformatters linked to a switch fabric in various configurations including multi-path and hierarchical switching systems (*see* Abstract).

The Examiner relies on col. 14, lines 30 to 36 of Saidi, which recites:

> FIG. 12 is a block diagram of the packet deformatter that is preferably used in conjunction with sequential train packet processing. Packet deformatter 130 is comprised of an input port 131, a packet restorer 176 linked to the input port, and an output port 133 linked to the packet restorer. The basic function of the packet restorer 176 is to receive train packets via the input port 131, and <u>extract each individual data packet that exists within the train packet, thereby restoring the data packets that were received by the packet formatters</u>. The packet restorer will use the train packet header for the train packet and the control header of each payload block within the train packet to restore the original data packets from the train packet. As stated, the information in those headers will identify the boundaries between data packets within the train packet payload. Once the data packets have been restored, each data packet is outputted via the output port 133.

As is visible from the above, Saidi only discloses a packet restorer 176 that extracts individual data packet that exists within the train packet. However, there is no disclosure or suggestion of extracting the IP datagram sections. Furthermore, there is no disclosure or suggestion of extracting the IP datagrams sections from a frame that also includes data of a mobile communication network and concatenating the IP datagram sections in order to direct the IP datagram sections to the Ethernet network. Therefore, Saidi does not cure the above-identified deficiencies of Motley.

Motley in view of Saidi fails to disclose or suggest "deformatting means for extracting the IP datagram sections from a frame comprising data from a mobile telecommunication network and the at least one section of the IP datagrams and concatenating the IP datagram sections in order to direct the IP datagram sections to the Ethernet network," as set forth in claim 4, which lacks extracting section of IP datagram from a frame that also has data of the mobile telecommunication network. In view of the foregoing, Applicant respectfully requests Examiner to withdraw this rejection of claim 4 and its dependent claim 13.

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Motley in view of Ferenc and Saidi. Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

Claim 5 depends on claim 1. Applicant has already demonstrated that Motley in view of Ferenc do not disclose or suggest the unique features of claim 5. Saidi is being cited only for its disclosure of the demultiplexing device and as such clearly does not cure the above-identified deficiencies of Motley and Ferenc. Accordingly, claim 1 is patentable over Motley and Ferenc in view of Saidi. Claim 5 is patentable at least by virtue of its dependency on claim 1.

V. Allowable Subject Matter

Applicant thanks the Examiner for indicating that claims 3, 6, 7, 10, and 11 contain allowable subject matter. Applicant rewrites claims 3 and 6 into their independent form. Therefore, Applicant respectfully requests the Examiner to now allow claims 3, 6, 7, 10, and 11.

VI. New Claims

In order to provide more varied protection, Applicant add claim 14, which is patentable by virtue of its dependency on claim 1 and for additional features set forth therein.

VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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